

VCM Plant

Conoco Chemicals
Continental Oil Company
P.O. Box 605
Westlake, Louisiana 70669
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March 23, 1977

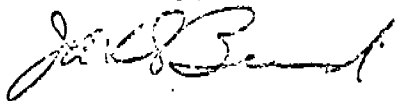
Mr. Paul D. Fahrenthold
Chief, Engineering Section
Air Compliance Branch
Region VI, Environmental Protection Agency
First International Building
1201 Elm Street
Dallas, TX 75270

Dear Mr. Fahrenthold:

Attached is the additional information relative to the waiver of compliance and waiver of omission testing request for the Continental Oil Company VCM Plant that you requested in your letter of February 28, 1977. This information is in addition to the information submitted in our original letter of December 21, 1976. We have tried to answer your requests to the best of our knowledge and to the best of our interpretation of the VCM Emission Standard.

Should you require any additional information, please contact me at 318/491-5053.

Sincerely,



J. A. DeBernardi
Plant Manager

is
Enc
CC + enc:
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REQUEST OF WAIVER OF COMPLIANCE - ADDITIONAL INFORMATION

As described in the Source Report of December 21, 1976, the Continental Oil Company VCM Plant presently has six emission points which cannot comply with sections of the National Emission Standard for vinyl chloride. The vent sources for each emission point and the particular paragraph of the regulation which applies to each source are listed below. A waiver of compliance from the listed paragraphs is requested for each source.

1) C-500 Stack, VS-391

This emission point contains the vent gases from ethylene dichloride purification and oxychlorination reaction. Waivers of compliance from paragraphs 61.62(a) and 61.62(b) are requested for this emission point and the following emission sources:

Ethylene Dichloride Purification 61.62(a)

Light Ends Column Overhead Accumulator S-102
Heavy Ends Column Overhead Accumulator S-103

Oxychlorination Reactor 61.62(b)

Oxy Vent Heater II-310

Control of the ethylene dichloride purification vents to VS-391 is not possible until CONOCO's thermal incineration system is installed and operational. The oxychlorination reaction vent is to be controlled by the oxychlorination vent cleanup reactor, R-305. As indicated in CONOCO's letter of December 21, 1976, our oxychlorination vent cleanup reactor was the first such unit to be placed in operation; and several problems involving control, catalyst loading, and catalyst change-out have been experienced. A waiver of compliance of paragraph 61.62(b) for the oxychlorination reaction vent has been requested to allow time for control optimization, catalyst aging experience, and to install cool-down and heat-up piping for catalyst change-out.

2) EDC Wash System Vents

A waiver of compliance from paragraph 61.62(a) is requested for the EDC wash system vents. These vents are from the following vessels:

Acid Wash Tank	T-103
Caustic Wash Tank	T-102
Steam Stripper Feed Tank	T-110

EDC wash system vents cannot be controlled until the thermal incineration system is installed and operational.

3) Process Waste Water Steam Stripper

A waiver of compliance from paragraphs 61.65(b)(9)(i) and 61.65(b)(9)(ii) is requested for the process waste water steam stripper, C-101. All inprocess wastewater is fed to this unit for chlorinated hydrocarbon removal. Preliminary

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testing of the stripper discharge has indicated that the vinyl content in the stripper bottoms can be controlled to less than 10 ppm during proper operation. It has been impossible to maintain proper operation, however, because of the materials and design problems mentioned in our letter of December 21, 1976. Therefore, a waiver of compliance from paragraph 61.65(b)(9)(i) is requested to allow the design and installation of a second steam stripper. A waiver of compliance from paragraph 61.65(b)(9)(ii) is requested to allow time for the installation of the thermal incinerator. Any vinyl chloride removed from the wastewater will be returned to this device.

4) EDC Purification Tanks

A waiver of compliance from paragraph 61.62(a) is requested for the vents from storage tanks in EDC purification service. The three tanks are:

Dry Crude EDC Tank	T-450
Wet Crude EDC Tank	T-453
Light Ends Tank	T-402

These vents will be controlled by the thermal incineration system.

5) Loading Vent Stack, VS-400

The loading vent stack is the point of emission for the fugitive emissions associated with rail car loading and a portion of the fugitive emissions associated with ship loading. A waiver of compliance from paragraph 61.65(b)(1)(ii) is requested for the rail car loading line emissions vented to VS-400. A waiver of compliance is also requested from paragraph 61.65(b)(2) for rail car slip gauge emissions which are vented to VS-400, and from 61.65(b)(7) for rail car samples which are vented to VS-400. In addition, a waiver of compliance is requested from paragraph 61.65(b)(5) for the manual venting of rail cars and ships to VS-400. With the installation of the thermal incineration system, all emissions presently vented from VS-400 will be controlled.

6) Dock Vent Stack, VS-600

The dock vent stack, VS-600 is the emission point for the fugitive emissions from line clearing and sampling during ship loading. A waiver of compliance from paragraph 61.65(b)(1)(ii) is requested for the ship loading line and hydroquinone injection line clearing emissions vented to VS-600. A waiver of compliance from paragraph 61.65(b)(7) is also requested for ship sampling emissions which are vented to VS-600. A portable carbon adsorption system will be used to control the vinyl emissions at the dock area. The vinyl emission vent created during the regeneration of the carbon beds will be ducted through the thermal incinerator for control.

WAIVER REQUEST, FUGITIVE EMISSION SOURCES - ADDITIONAL INFORMATION

The additional information requested on February 28, 1977 for the fugitive emission sources is listed below.

Rotating Pumps

A waiver of compliance from paragraph 61.65(b)(3)(i) is requested for the thirteen pumps in vinyl service which do not have the emission from between the double mechanical seals ducted to a control device. The thirteen pumps are:

P-202 A, B	Quench Column Reflux
P-203 A, B	Vinyl Column Feed
P-204 A, B	Vinyl Column Reflux
P-401 A, B	Vinyl Transfer
P-411 A, B, C	Vinyl Loading
P-415	Vinyl Rerun
P-490	Vinyl Vent Recovery

The seal emission from these pumps will be controlled by the thermal incineration system.

Rotating Compressors

A waiver of compliance from paragraph 61.65(b)(3)(iii) is requested for the emission from the double mechanical seals on the dock vinyl vent recovery compressor, BL-625. This emission will be controlled by the portable carbon beds which will be regenerated to the thermal incinerator.

Reciprocating Compressors

A waiver of compliance from paragraph 61.65(b)(3)(iv) is requested for the emission from the double packing seal on the vinyl vent recovery compressor, BL-409. This emission will be controlled by the thermal incineration system.

Relief Valves

A waiver of compliance from paragraph 61.65(b)(4) is requested for the relief valves in vinyl service which do not presently have a rupture disc under the relief valve. There are 45 such valves in the CONOCO VCM Plant, not 48 as had previously been reported. One of the valves which had previously been reported is no longer in service, and two other valves discharge to a closed piping system and thus do not require rupture discs. The 45 relief valves and the equipment that they protect are as follows:

RV-206 A&B	- C-203, Vinyl Column
RV-209	- S-206, Vinyl Caustic Decanter
RV-210	- S-207A, Vinyl Flake Caustic Dryer
RV-211	- S-207B, Vinyl Flake Caustic Dryer
RV-319	- Vinyl Line to T-411C, Vinyl Sphere
RV-320	- P-401A Disch. Hdr., Vinyl Transfer Pump
RV-321	- P-401 A&B Suction Hdr., Vinyl Transfer Pump
RV-322	- P-411 A&B Disch. Hdr., Vinyl Loading Pumps
RV-323	- F-402, Vinyl Product Filter
RV-324	- F-402 Inlet, Vinyl Product Filter
RV-325	- F-402 Outlet, Vinyl Product Filter
RV-326	- P-411 A,B,&C Suction, Vinyl Loading Pumps
RV-327	- P-401 A&B Disch., Vinyl Transfer Pumps
RV-328	- P-401 A&B Disch., Vinyl Transfer Pumps
RV-329	- P-401 A&B Disch., Vinyl Transfer Pumps
RV-330	- P-401B Suction, Vinyl Transfer Pumps
RV-331	- P-401 Hdr., Vinyl Transfer Pumps
RV-342	- T-401 A,B&C Hdr., Vinyl Check Tank
RV-413	- F-401, Vinyl Transfer Filter
RV-414	- F-402, Vinyl Product Filter
RV-454	- Railcar Loading Header
RV-491	- P-491 Suction, Refrig. Vinyl Transfer Pump
RV-458	- H-491, Refrig. Vinyl Condenser
RV-459	- P-491 Disch., Refrig. Vinyl Transfer Pump
RV-461	- H-486, Refrig. Vinyl Liquid and Vent Heater
RV-462	- H-486, Refrig. Vinyl Liquid and Vent Heater
RV-463	- H-491, Refrig. Vinyl Condenser
RV-485	- H-485, Vinyl Recovery Fin-Fan Cooler
RV-486	- T-490, Vent Recovery Tank
RV-490	- T-490, Vent Recovery Tank
RV-491	- T-490, Vent Recovery Tank
RV-492	- P-490 Disch., Vent Rec. Transfer Pump
RV-625	- BL-625, Dock Vinyl Vent Recovery Comp.
RV-664	- S-626, Dock Compressor Disch. Drum
RV-627	- F-625, Dock Product Filter
RV-628	- F-624, Dock Product Filter
RV-638	- Railcar Loading Rack
RV-639	- Railcar Loading Rack
RV-640	- F-403, Vinyl Rerun Filter
RV-642	- S-401, Loading Caustic Dryer
RV-643	- S-402, Loading Bauxite Dryer
RV-652	- Dock Vent return line
RV-654	- BL-409, Rec. Unit Corken Comp.
RV-665	- T-626, Dock Compressor Suction Drum

As indicated in CONOCO's letter of December 21, 1976, the rupture discs will be installed by February 1, 1978.

Manual Equipment Venting

A waiver of compliance from paragraph 61.65 (b)(5) is requested for the manual venting of inert gas build-up from the vinyl column accumulator S-205; and the vinyl check tanks and product spheres T-401A, T-401B, T-401C, and T-411A, T-411B, T-411C, T-411D. This venting will be controlled by the thermal incinerator.

Opening of Equipment

A waiver of compliance from paragraph 61.65 (b)(6)(ii) is requested for the opening of equipment in vinyl chloride service to allow maintenance, re-charging, or inspection. The following items are in vinyl service at the CONOCO VCM Plant.

R-201 A&B	- Cracking Furnaces
C-201	- Quench Column
S-202	- Quench Column Bottoms Drum
H-211 & S-217	- HCl Interchanger & K.O. Drum
H-202 A&B	- Quench Column Condenser
H-203	- Quench Column Reflux Cooler
C-202	- HCl Column
T-202	- HCl Column Bottoms Drum
H-205	- HCl Column Reboiler
C-203	- Vinyl Column
H-207 A&B	- Vinyl Column Condenser
S-205	- Vinyl Column Accumulator
S-206	- Vinyl Caustic Decanter
S-207 A&B	- Vinyl Flake Caustic Dryers
T-401 A,B,C	- Check Tanks
T-411 A,B,C,&D	- Vinyl Product Spheres
S-401	- Loading Caustic Dryer
S-402	- Loading Bauxite Dryer
T-626	- Dock Comp. Suction Drum
S-626	- Dock Compressor Discharge Drum
T-490	- Plant Vent Recovery Tank
T-491	- Plant Refrig. Vent Rec. Tank
H-491	- Refrig. Vinyl Condenser
H-486	- Refrig. Vinyl Liquid and Vent Heater
H-485	- Plant Vent Recovery Fin-Fan Cooler
H-625	- Dock Vent Recovery Fin-Fan Cooler

Samples

A waiver of compliance from paragraph 61.65 (b)(7) is requested for the vinyl sample emissions from low pressure sources which cannot be returned to the process. These samples will be vented to the thermal incineration system.

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REQUEST FOR WAIVER OF EMISSION TESTING-ADDITIONAL INFORMATION

The Continental Oil Company VCM Plant requests that a waiver of the emission testing requirements as defined by Section 61.67 be granted for those emission sources which are granted a waiver of compliance. Specifically, a waiver of emission testing is requested for the six existing emission points and the fugitive emission sources which will be ducted to the thermal incinerator. After the installation of the proposed control devices, emission testing will be required at four emission points: the thermal incinerator vent, oxychlorination cleanup reactor vent, steam stripper bottoms line (C-101 and spare), and the portable carbon bed system at the dock.

The emission source areas which will be controlled by the proposed devices are as follows:

Thermal Incineration System

This system will control the emissions from the ethylene dichloride purification section as required by 61.62 (a), and any fugitive vapor emission sources for the plant area which must be controlled as required by 61.65 (b).

Oxychlorination Vent Cleanup Reactor, R-305

This system will control the emissions from the oxychlorination reactor as required by 61.62 (b). The R-305 vent will be vented through the C-500 stack.

Steam Stripper Bottoms

This system will control the vinyl emissions from inprocess wastewater as required by 61.65 (b)(9).

Portable Carbon Bed System

This system will control fugitive vapor emissions at the dock area which cannot be returned to the plant. This will ensure compliance with Section 61.62 (b) for the dock area.

As indicated in the CONOCO VCM Plant letter of December 21, 1977, none of these control devices will be in final compliance until 1978. Therefore, no compliance testing is possible at this time. Rather, all compliance testing for the four emission points at the CONOCO VCM Plant can be conducted in October, 1978.